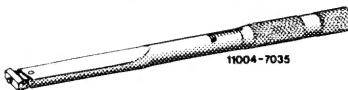
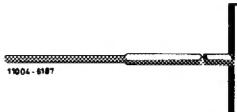


## 18–210 Removal and installation of oil pump

| Tightening torques                               |   | Nm               |
|--|---|------------------|
| Oil drain plug to oil pan                        |   | 35–45            |
| Oil pan upper half to cylinder crankcase         | M 6   | 9–11             |
|  | M 8   | 20–25            |
| Oil pan lower half to upper half                 |   | 9–11             |
| Engine carrier to engine mount front             |   | 70               |
| Oil pump   | to crankcase  | 20–25            |
|  | to flange member  | 9–11             |
| Sprocket on oil pump                             |   | 30–35            |
| Special tools                                    |   |                  |
| Torque wrench handle 20–100 Nm                   |    | 001 589 35 21 00 |
| Torque wrench handle 50–200 Nm                   |    | 001 589 44 21 00 |
| Changeover ratchet for torque wrench             |    | 001 589 42 09 00 |
| Allen wrench 5 mm, 300 mm long                   |   | 116 589 02 07 00 |
| Knock-out mandrel 9 mm dia.                      |    | 110 589 02 15 00 |
| Socket 27 mm, 1/2" square<br>for rotating engine |  | 001 589 65 09 00 |
| Knock-in tool for oil dipstick<br>guide tube     |    | 117 589 00 31 00 |
| Conventional tool                                |   |                  |
| Engine hoist (Motordirigent) size 1.5            | e.g. made by Bäcker, D–5630 Remscheid<br>Order No. 3178   |                  |

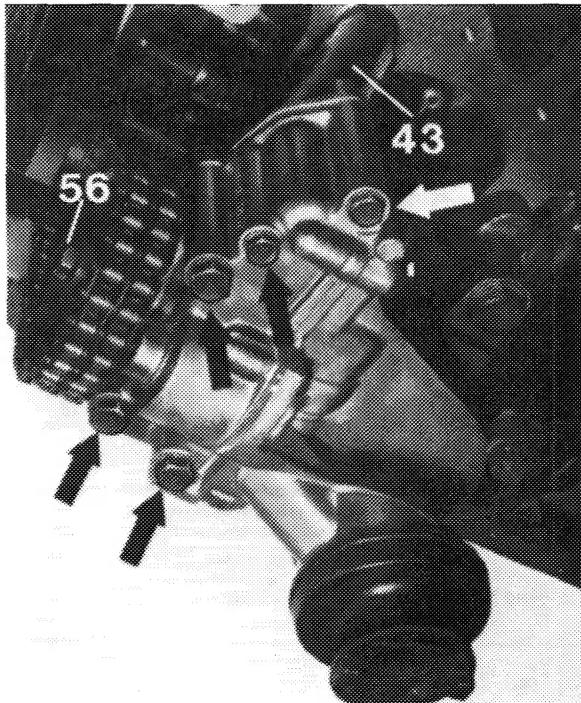
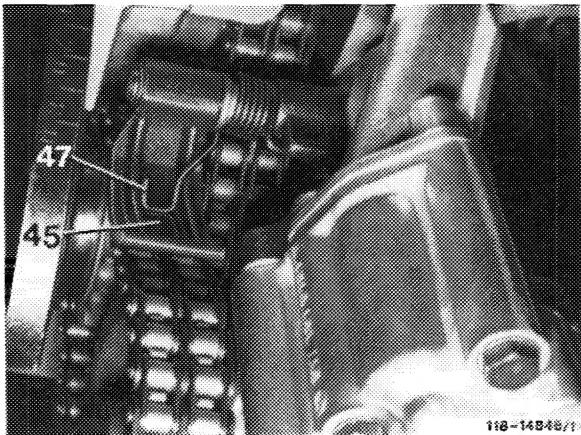
## Note

Since a connecting link might wipe against timing chain or oil pan, do not open double roller chain during repairs and connect again by means of a connecting link.

To renew double roller chain and tensioning unit, completely remove oil pan (01-310) and front cylinder housing cover (01-107).

## Removal

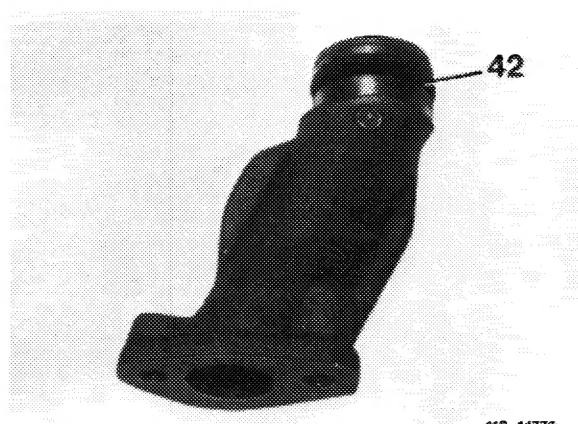
- 1 Completely remove oil pan (01-310).
  - 2 Unscrew fastening screw (56) of sprocket.
  - 3 Remove torsion spring (47) from clamp (45) in rearward direction.
  - 4 Turn clamp in upward direction.
- 45 Clamp  
47 Torsion spring
- 5 Remove sprocket by means of two screwdrivers.
  - 6 Unscrew hex. screws (arrows) on oil pump and remove oil pump.
  - 7 Remove sprocket.
  - 8 Pull flange member (43) out of cylinder crankcase.



43 Flange member  
56 Fastening screw

## Installation

- 9 Renew O-ring (42) on flange member, if damaged.
- 10 Insert flange member.
- 11 Place sprocket into double roller chain.
- 12 Install oil pump and tighten fastening screws to 20–25 Nm on crankcase or 9–11 Nm on flange member.

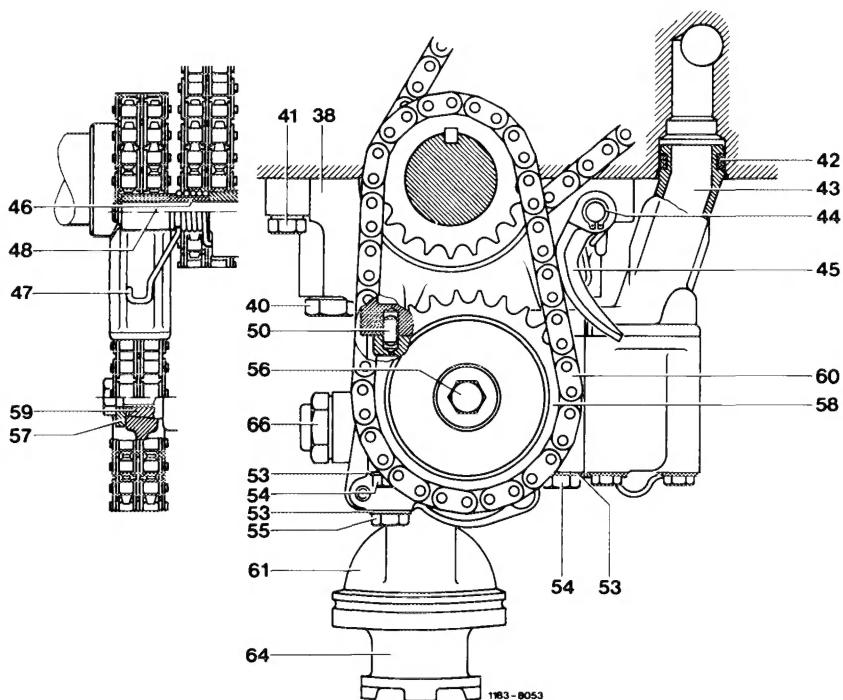


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42 O-ring

- 13 Place sprocket on drive shaft and tighten fastening screw (56) to 30–35 Nm.
- 14 Set clamp on double roller chain and place torsion spring on clamp.
- 15 Completely install oil pan (01–310).

## Layout of oil pump



|                             |                   |   |
|-----------------------------|-------------------|---|
| 38 Crankshaft bearing cover | 47 Torsion spring | 58 Drive sprocket                         |
| 40 Hex. screw               | 48 Bolt           | 59 Drive shaft                            |
| 41 Hex. screw               | 50 Fitted pin     | 60 Double roller chain                    |
| 42 O-ring                   | 53 Spring washer  | 61 Strainer                               |
| 43 Flange member            | 54 Hex. screw     | 64 Adapter                                |
| 44 Locking ring             | 55 Hex. screw     | 66 Closing plug oil pressure relief valve |
| 45 Clamp                    | 56 Hex. screw     |   |
| 46 Bushing                  | 57 Washer         |   |